

# Using LinkOut

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LinkOut provides access to a wide range of relevant online resources, directly from Entrez databases. This section provides information on using LinkOut to locate and access these resources.

Your local librarian will be best equipped to help you discover LinkOut resources available through your institution or library. Please talk to your librarian about using LinkOut.

## Viewing LinkOut Resources in Entrez Records: The LinkOut Display

You can see links that have been assigned to an Entrez record in the LinkOut display. In PubMed, you can also view links as icons.

**Note:** When you click on LinkOut icons or links in the LinkOut display, you leave PubMed and are directed to the resource at an external site. Please review all use and copyright information on the resource provider's site before using or distributing their material.

To view the LinkOut display for a single Entrez record, click on the Links menu, located on the right side of the screen (**B** in the image below). If available for the citation, LinkOut is included in the Links menu (**C**). To view the LinkOut display for all records retrieved by a search, select LinkOut from the Display drop-down menu (**A**).




The LinkOut display, shown below, has the same format regardless of which Entrez database you are using. Available resources will vary depending on which links have been assigned to the specific Entrez record.

The following **LinkOut** resources are supplied by external providers. These providers are responsible for maintaining the links. What does the **icon** mean?

☐ 1: [Knowlton KU et al](#). A mutation in the puff region...[PMID: 8892902] [Related Articles, Links](#)

**Full Text Sources** — Links to electronic full-text.

 <b>FREE</b>	HighWire Press	<a href="#">PDF</a>
<b>FREE</b>	PubMed Central	<a href="#">Full Text</a>

**Other Literature Sources** — Links to related material such as commentaries and discussions.

<a href="#">Author Profiles - Community of Science</a>
<a href="#">Document Delivery - Infotrieve</a>

**Libraries** — List of libraries with access to print or electronic full-text.

**Medical**

<b>FREE</b>	MEDLINEplus Health Information
	<a href="#">Cardiomyopathy</a> <a href="#">Viral Infections</a>

**Molecular Biology Databases**

<b>FREE</b>	HSDB
	<a href="#">(L)-ASPARTIC ACID</a>

**Research Materials**

<b>FREE</b>	American Type Culture Collection
	<a href="#">ATCC CRL-1751</a> <a href="#">ATCC TIB-67</a>

Links to related material such as biological databases, consumer health information, and research tools.

LinkOut information may also appear within Entrez records. For example, you can see the External Information Resources section in Entrez Taxonomy records. The appearance of links within Entrez records varies according to the database that you are using.

For additional information about the types of links found in Entrez, please see Database Neighbors and Interlinking [[http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helpentrez.section.EntrezHelp.Database\\_Neighbors\\_a](http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helpentrez.section.EntrezHelp.Database_Neighbors_a)] in Entrez Help [<http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helpentrez>].

## Viewing Links as Icons in PubMed

You can view links as icons in PubMed's AbstractPlus, Abstract and Citation displays (use the Display drop-down menu to change the display). The icons are supplied by LinkOut providers - external organizations that have submitted linking information for their web-accessible resources. The list of LinkOut providers [[http://www.ncbi.nlm.nih.gov/entrez/journals/active\\_providers.html](http://www.ncbi.nlm.nih.gov/entrez/journals/active_providers.html)] includes libraries, publishers, research institutes, and a variety of commercial and non-profit organizations.

Three types of LinkOut icons appear in PubMed by default - icons that link to PubMed Central, icons that link to free full text, and icons that link to full text at the publisher's site. Full text at the publisher's site may require a subscription to view.

The image below shows a PubMed citation with two default icons, an icon that links to full text at the publisher's site and an icon that links to free full text at PubMed Central.



You can customize the icon display by activating icons for a specific provider.

## Activating Icons for LinkOut Providers

You can customize the icon display to show links provided by your institution or links to a particular online resource, such as a MedlinePlus. Your library may have already set up a customized icon display for your institution. Check your library homepage for a special link to PubMed.

Note: When you click on LinkOut icons or links in the LinkOut display, you leave PubMed and are directed to the resource at an external site. Please review all use and copyright information on the resource provider's site before using or distributing their material.

In the image below, four icons are displayed. The icons for bmj.com and PubMed Central, to the right of the article title, appear in PubMed automatically (more about default icons). The icons for MedlinePlus and the University of South Carolina School of Medicine Online collection, below the article abstract, have been activated by the user. When users click an icon, they leave PubMed and are directed to the resource at the provider's site.



To activate provider icons, you can either select the provider(s) as filters in My NCBI or enter PubMed through a special URL that will activate the provider icons. To learn how to select providers as filters, see Setting LinkOut Preferences [http://www.ncbi.nlm.nih.gov/books/bv.fcgi?

rid=helppubmed.section.pubmedhelp.My\_NCBI#pubmedhelp.Setting\_LinkOut\_pref] in My NCBI Help or view the LinkOut Filters Quick Tour [http://www.nlm.nih.gov/bsd/viewlet/myncbi/linkout\_filter.swf] (animated tutorial, running time approx. 6 minutes; Macromedia Flash™ Player [http://www.macromedia.com/shockwave/download/download.cgi?P1\_Prod\_Version=ShockwaveFlash] required to view.)

Instructions for activating icons using a special URL follow. You can also view Displaying LinkOut Icons Using a Special URL [[http://www.ncbi.nlm.nih.gov/entrez/linkout/doc/viewlet/Displaying\\_icons\\_URL\\_viewlet\\_swf.html](http://www.ncbi.nlm.nih.gov/entrez/linkout/doc/viewlet/Displaying_icons_URL_viewlet_swf.html)] (animated tutorial; Macromedia Flash™ Player [[http://www.macromedia.com/shockwave/download/download.cgi?P1\\_Prod\\_Version=ShockwaveFlash](http://www.macromedia.com/shockwave/download/download.cgi?P1_Prod_Version=ShockwaveFlash)] required to view.)

## Activate Icons Using a Special URL

To activate icons using a special URL, enter PubMed through the following URL:

<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?holding=NameAbbr>

Replace *NameAbbr* with a provider's LinkOut User Name.

### Example

To display LinkOut icons for MedlinePlus, with user name *medplus*, enter PubMed through the following URL:

<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?holding=medplus>

The *holding=* parameter can also be appended to [www.pubmed.gov](http://www.pubmed.gov).

## Activate Icons for Multiple Providers

To activate icons for multiple providers using a special URL, create a URL, as described above. Add additional User Names to the URL, separating the User Names with commas. You can activate icons for as many providers as you like.

### Example

To display LinkOut icons for the LinkOut Demonstration Library, User Name *psrmlib*, and MedlinePlus, User Name *medplus*, enter PubMed through the following URL:

<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?holding=psrmlib,medplus>

The *holding=* parameter can also be appended to [www.pubmed.gov](http://www.pubmed.gov).

All providers must be LinkOut participants. You can find providers' LinkOut User Names (NameAbbr) in the following lists of LinkOut Providers:

- All LinkOut Providers [[http://www.ncbi.nlm.nih.gov/entrez/journals/active\\_providers.html](http://www.ncbi.nlm.nih.gov/entrez/journals/active_providers.html)]
- LinkOut Libraries [[http://www.ncbi.nlm.nih.gov/entrez/journals/active\\_libraries.html](http://www.ncbi.nlm.nih.gov/entrez/journals/active_libraries.html)]
- LinkOut Resource Providers [<http://www.ncbi.nlm.nih.gov/entrez/journals/loprovlink.html>] (excluding full-text providers)

When you enter PubMed through a special URL, a cookie is placed on your workstation that instructs PubMed to display the icons until 8 hours of inactivity have passed (more about cookies [<http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helppubmed.section.pubmedhelp.Appendices#pubmedhelp.Cookies>]).

## Locating Entrez Records with Links to a Specific Resource

There are two ways locate Entrez records with links to a specific resource. My NCBI can display the records as a filter tab in the search result, or you can limit an individual search to records with links to a specific resource.

### Using Filters to Display Entrez Records with Links to Specific Resources

My NCBI includes a filters feature that groups search results by areas of interest. For example, PubMed citations that are available at your library, or Nucleotide records with links to a particular molecular biology database can be grouped, as a filter tab in the results of Entrez searches. Filters are available in a number of Entrez databases, including PubMed, Nucleotide, and Taxonomy. A complete list of databases in which filters can be displayed is available in My NCBI [[http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helppubmed.section.pubmedhelp.My\\_NCBI](http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helppubmed.section.pubmedhelp.My_NCBI)].

rid=helppubmed.section.pubmedhelp.My\_NCBI].

To display Entrez records as a filter tab in the search result:

1. Sign in to My NCBI [[http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helppubmed.section.pubmedhelp.My\\_NCBI](http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helppubmed.section.pubmedhelp.My_NCBI)].
2. Click **Filters** in the blue sidebar menu.
3. Select the desired database from the list of Entrez databases.
4. **Browse** LinkOut filters or **Search** for the LinkOut provider by name.
5. Select the provider that you would like to display as a filter tab. Click **Add a result tab for all items** that match this filter. To display the provider's icon in PubMed, click **Add a link icon** to every item that matches this filter. You can select up to five filters for each database in My NCBI.

The providers that you selected will be displayed as a filter tab as long as you are signed in to My NCBI.

In the following example, the user has selected the LinkOut Demonstration Library (psrmlib) as a filter. Notice that the LinkOut Demo icon is displayed below the abstract and citations available from the LinkOut Demonstration library are grouped as a filter tab.

The screenshot shows a PubMed search result page. At the top, there are controls for 'Display' (set to 'AbstractPlus'), 'Show' (set to '20'), 'Sort by', and 'Send to'. Below these, a filter tab is highlighted with a red box, showing 'All: 210' and 'LinkOut Demo Library: 136'. The main content area displays a search result for a BMJ article from 2005. Below the article title, there are two 'LinkOut Demo' icons: 'LinkOut Demo Online' and 'LinkOut Demo In Print', both highlighted with red boxes. To the right of the article, there is a 'Related Links' section with several links to related articles.

To learn more about using filters in My NCBI, see the LinkOut Filters [[http://www.nlm.nih.gov/bsd/viewlet/myncbi/linkout\\_filter.swf](http://www.nlm.nih.gov/bsd/viewlet/myncbi/linkout_filter.swf)] Quick Tour (animated tutorial, running time approx. 6 minutes; Macromedia Flash™ Player [[http://www.macromedia.com/shockwave/download/download.cgi?P1\\_Prod\\_Version=Shockwave-Flash](http://www.macromedia.com/shockwave/download/download.cgi?P1_Prod_Version=Shockwave-Flash)] required to view) or My NCBI Help [[http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helppubmed.section.MyNCBI.Working\\_with\\_Filters](http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helppubmed.section.MyNCBI.Working_with_Filters)].

## Limiting a Search to Records with Links to a Specific Resource

To limit a single search to records with links to a specific resource, enter the following in the search box:

### **loprovNameAbbr [filter]**

Replace **NameAbbr** with the library's LinkOut User Name.

This filter will be effective for *that search only*.

Using the LinkOut Demonstration Library as an example:

Search PubMed for loprovpsrmlib [filter]. The Demonstration Library's LinkOut User Name is psrmlib.

This limits the search to holdings included in the Demonstration Library holdings.

This filter can be used as part of any PubMed search.

Example: Limit a search for "AIDS" to articles available from the LinkOut Demo Library  
aids AND loprovpsrmlib [filter]

**NOTE:** Limiting your search in this way will not cause the provider's icon to display. Provider icons must be activated in My NCBI or with a special URL.

## Obtaining the Full Text of an Article

PubMed does not include copies of journal articles. Here are some tips for obtaining articles:

- Free [[http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helppubmed.section.pubmedhelp.How\\_to\\_Get\\_the\\_Journ#pubmedhelp.Free\\_copies\\_of\\_some\\_](http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helppubmed.section.pubmedhelp.How_to_Get_the_Journ#pubmedhelp.Free_copies_of_some_)] copies of some articles may be obtained through links in PubMed. To locate these articles more easily, try limiting your search [<http://www.ncbi.nlm.nih.gov/entrez/linkout/doc/liblofaq.html#free>] to citations with free full text available. Note: When you click on LinkOut icons or links in the LinkOut display, you leave PubMed and are directed to the full text at an external site. Please review all use and copyright information on the full-text provider's site before using or distributing their material.
- If you are a health professional or are affiliated with a hospital, university, or other institution, you should check your local medical library [[http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helppubmed.section.pubmedhelp.How\\_to\\_Get\\_the\\_Journ#pubmedhelp.If\\_you\\_are\\_affiliate](http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helppubmed.section.pubmedhelp.How_to_Get_the_Journ#pubmedhelp.If_you_are_affiliate)], or consider registering for Loansome Doc [[http://www.nlm.nih.gov/pubs/factsheets/loansome\\_doc.html](http://www.nlm.nih.gov/pubs/factsheets/loansome_doc.html)], an NLM-sponsored document delivery service.
- You may also want to check with your local library [[http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helppubmed.section.pubmedhelp.How\\_to\\_Get\\_the\\_Journ#pubmedhelp.Local\\_library](http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helppubmed.section.pubmedhelp.How_to_Get_the_Journ#pubmedhelp.Local_library)], or go directly to the publisher [[http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helppubmed.section.pubmedhelp.How\\_to\\_Get\\_the\\_Journ#pubmedhelp.Direct\\_from\\_publisher](http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helppubmed.section.pubmedhelp.How_to_Get_the_Journ#pubmedhelp.Direct_from_publisher)].

## **Additional Assistance**

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If you belong to a library, talk to a librarian at your institution about using LinkOut. Your local librarian will be best equipped to help you discover LinkOut resources available through your institution.

Please send comments and suggestions about LinkOut and report broken links to [linkout@ncbi.nlm.nih.gov](mailto:linkout@ncbi.nlm.nih.gov) [mailto:].